Changing the Rules of the Game through Technology

6th CII BANKing TECH Summit

28 June 2011

Confederation of Indian Industry

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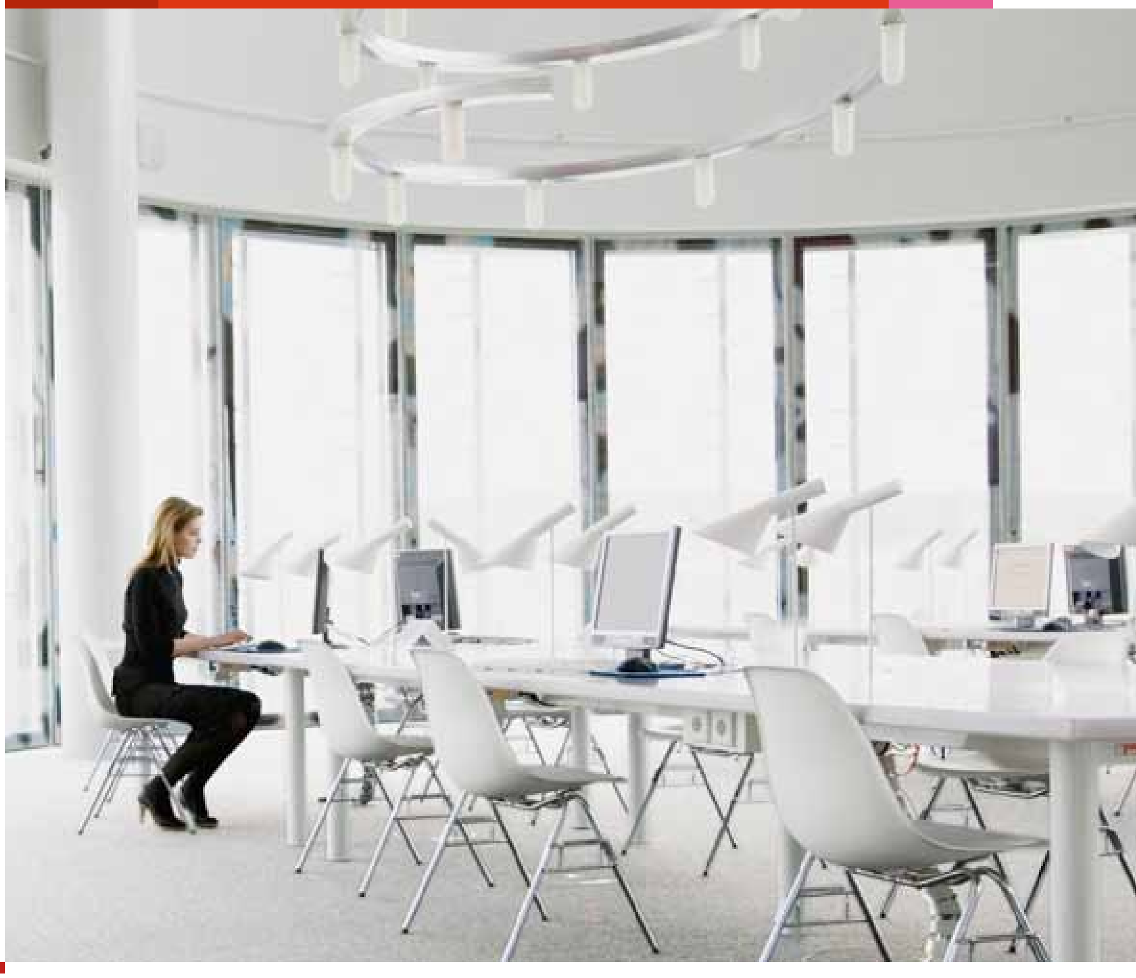

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Chairman's Message

Keeping pace with the growth of the global banking industry, the Indian banking industry has evolved and matured across multiple directions – Banking the unbanked, Segmenting the customers with tailor made products & services and evolving into a financial services conglomerate.

Indian Banks are successfully integrating technology with their business model and thereby creating a competitive advantage for themselves at the market place. Technology has the potential to add value to all dimensions of banking, ranging from improving the service delivery mechanism, enhancing customer experience, building a prudent risk governance framework and overall increasing profitability.

The CII BANKing TECH Summit has evolved with each year bringing to the forefront the various technologies that are being used by the banking fraternity, as well as touching upon some of the emerging technologies which are gaining ground in the banking industry. The Summit offers an integrated platform to the industry stakeholders to deliberate upon the ways in which technology can be leveraged to take the growth of banking to the next level.

I would like to thank PwC for being our Knowledge Partner and in presenting their report titled "Changing the rules of the game through technology", which provides an insight into several challenges which technology seeks to address.

N Chandrasekaran
Chairman-CII's BANKing TECH Summit 2011 and
Chief Executive Officer & Managing Director
Tata Consultancy Services Ltd.

Foreword

As we progress into the sixth annual CII BANKing TECH Summit, PwC takes great pride in presenting our report showcasing the views of several banking institutions, on the role of technology leading the growth in their sector.

PwC has conducted an extensive survey and has met key stakeholders from the industry, across representative categories. A questionnaire was designed by our experts to help gain an insight into the status of technology usage in banks, how it has helped grow revenues and profitability, its role in customer service and building a sustainable banking model with its support.

The responses to the survey have been analysed and duly assessed to arrive at our points of view. We hope that this report will help give you an overview of the crucial role played by technology in the banking industry and recognise its importance.

We thank CII for their support in all our endeavours and for giving us this opportunity to be the knowledge partner for this prestigious event.

Harsh Bisht
Leader-Banking & Capital Markets

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Background

The current boom in technology promises unprecedented growth for the banking sector. With cutting-edge competition in this space, it is imperative for banks to gear up for increased investments in technology and to have the vision to establish a technology-based business model.

All arenas of banking, including product development, MIS, regulatory reporting, risk management, customer relationship management and most importantly financial inclusion, need the support of technology to differentiate themselves from competition. Since most of banking products are similar with benefits offered in equal measure, it is only the service and level of customisation that prompts the customer to offer his/her loyalties to one provider.

Product platforms are being revamped to churn out multiple products and service offerings using updated technology tools. Customer-centric banks are gradually using technology to provide ease and convenience to customers. Barring the initial hiccup of acceptance, an increasing number of customers are on their way to becoming more tech-savvy.

Along with focusing on customer retention on one hand, banks are grappling with the challenge of security and compliance requirements with the increased use of IT. Banks need to invest in providing better security solutions in order to prevent fraud and protect the interest of customers.

Besides catering to customer satisfaction, banks have a storehouse of benefits that they can provide from increased use of technology, in terms of cost optimisation, efficient customer service, streamlining operations, speed and accuracy in transactions and the overall flow of communication.

Financial inclusion, the focal point for all banks presently, is hugely dependent on technology to reach the un-banked population of India. To provide access to banking services in remote villages, the potential of technology needs to be explored and tapped to create a comprehensive and sustainable delivery model.

The application of emerging technologies like cloud computing and Software as a Service (SaaS) architecture is surfacing steadily in the banking domain. Although these have gained popularity across the globe, India still has to cash in on the benefits of rolling out these technologies.

This report seeks to examine the various aspects of banking where technology has helped reap benefits and has the potential to do so.

Section I: Current scenario

New bearings for the sector with Technology

The adoption of technology has heralded a transformational development in the banking sector, enabling banks to reach out to customers with a platter of service offerings. The use of technology tools has helped to deal with the challenges of product innovation, services for customers, security enhancement measures and improving the delivery model to increase access.

Banks are seen to gradually increase their spend on IT as they realise its importance.

Technology: Redefining the customer experience…

Technology has provided the customer with the comfort of banking with just the click of a button. Payment and settlement systems have been rendered more efficient, coupled with electronic payment modes increasing the speed of transactions. In addition, the development of a multi-service platform has been made possible to serve customers and offer them a wide range of choice.

Customer retention is a challenge today where most banks offer similar products and services. Hence it is essential that customer relationships are nurtured with care. Banking technology needs to focus on being customer-centric in all respects, aiming to bring an increasing number of people into the banking system.

In this regard, banks have been evaluating their IT capabilities and are strategising to improve continuously.

Delivery channels: Increasing reach

Distribution models are the backbone of any industry and more so for the banking sector as it tracks a fast-paced agenda towards financial inclusion. In the current scenario, where around 40% of the population is un-banked, it is quite evident that the delivery channel is a weak link in the banking system. Technology needs to provide adequate support to create a viable and decentralised delivery model.

Banks cannot scale up their operations and improve efficiency without the use of technology. Reigning in innovation is an ongoing process in the service delivery model, and must be taken into account at every step of functioning. Technology will act as a facilitator to provide a flexible and efficient delivery model.

Regulatory compliance

With a slew of changes, regulatory compliance has taken a big step supported by technology. Some of the areas that have gained strength with the adoption of technology are risk management, anti-money laundering regulations and IT security framework. Banks need to gauge the extensive role played by technology to manage the complexities arising out of regulatory compliance.

For instance, Basel-II and Basel III implementation projects are likely to impact a bank's IT systems, processes, people and business. Some of the key concerns which need to be addressed are as follows:

- Effective integration of technology into all systems and processes, with re-engineering of some processes
- Methodologies to assess risks and calculate updated risk weighted assets applying the latest technology,
- Stress testing, contingency plans and
- Systems selection, data and change management associated with Basel implementation

These reforms will fundamentally impact profitability and require transformation of the business models of many banks. It also implies that banks need to undertake significant process and system changes to achieve upgrades facilitated by technology in the areas of stress testing, counterparty risk, and capital management infrastructure. Increased transparency with the advanced technology will enable banks to provide the required information to regulators.

Product landscape: Painting a brighter picture

Changing customer needs demand that products be tailored to suit customer requirements. Technology needs to be made the most of to bring in flexibility, simplicity and convenience to the customer, keeping in mind their needs and requirements. Globalisation and modernisation have driven banks to sharpen their competitive edge by aligning products and services with the latest technological innovations. Technology can be used to create differentiation among these myriad products in terms of specialisation, new features and value-additions.

However, it is critical for banks to focus on different customer segments with different requirements.

Summing up…

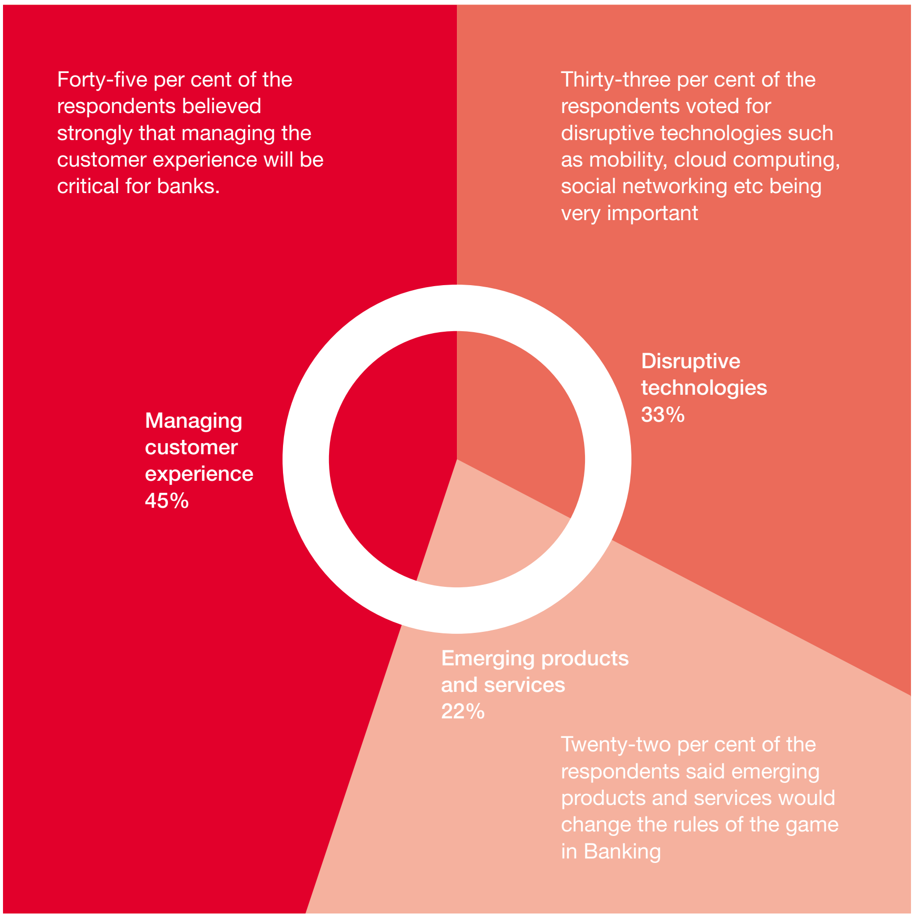
The role of IT in banks has evolved over the years. Today, IT is seen more as a strategic function rather than merely a support function. Technology has percolated into all banking functions, impacting all arenas of banking.

Our meetings with bankers revealed that more than three-fourths (89%) of the respondents agreed that IT was critical in helping them meet their objectives in all areas of banking operations, increasing efficiencies. Around 11% felt that IT was limited to only reducing costs.

What the bankers have to say….

Survey Results:

Which factor will change the rules of the game in banking?



Source: PwC Survey

Our survey results indicate that most banks believe, managing customer experience is the key to customer retention and sustainable growth. With disruptive technologies like cloud computing and social networking steadily catching up in India, around one-third of the respondents strongly felt that these will lead to further growth. Emerging products and services and risk and regulatory requirements may not have a major impact but will still contribute to the future of banking. A small section of bankers also felt that using technology to provide information quickly and with ease will be imperative for the growth of the banking sector.

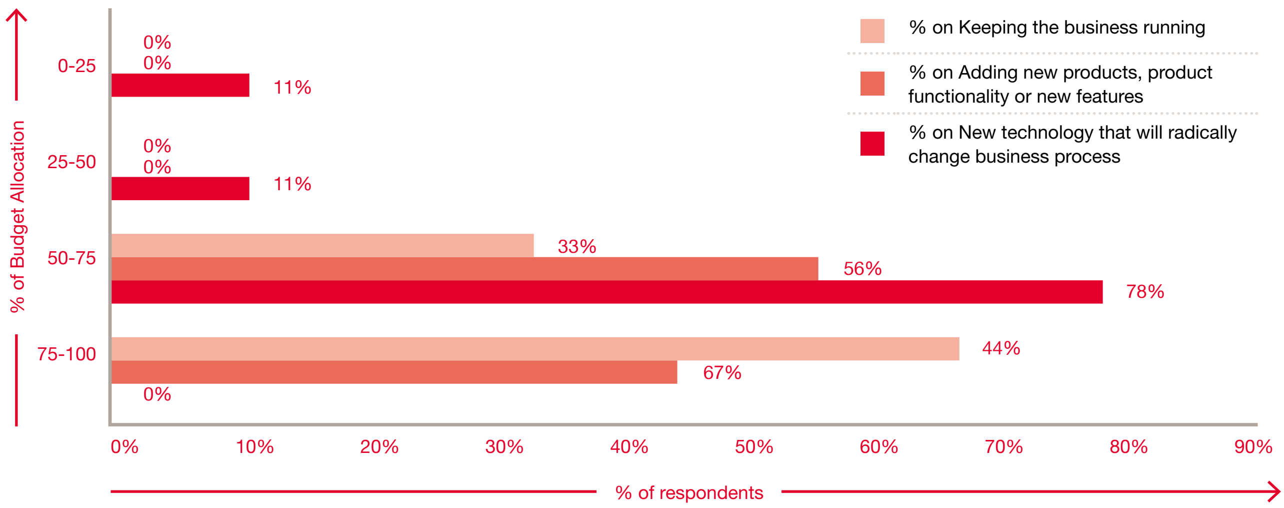
Allocation of IT budgets

When we asked the CIOs about IT budget allocation, most were of the view that the maximum budget was spent on keeping the business running. The survey results indicated that over three-fourths of the respondents would allocate 25 to 50% of their budget to keep their businesses running. Around 11% opted for a higher allocation of the IT budget in the bracket of 50 to 75%.

Half of the respondents felt that they would allocate 25 to 50% of their budget on adding new products, product functionality and new features, while 67% said that they would allocate 25% or less on new technology, to radically change business process.

Our survey also revealed some amount of scepticism on spending on new technology, probably because of the high cost involved. Not to be disregarded is the risk element attached to implementing new technology and processes.

% of IT budget allocation

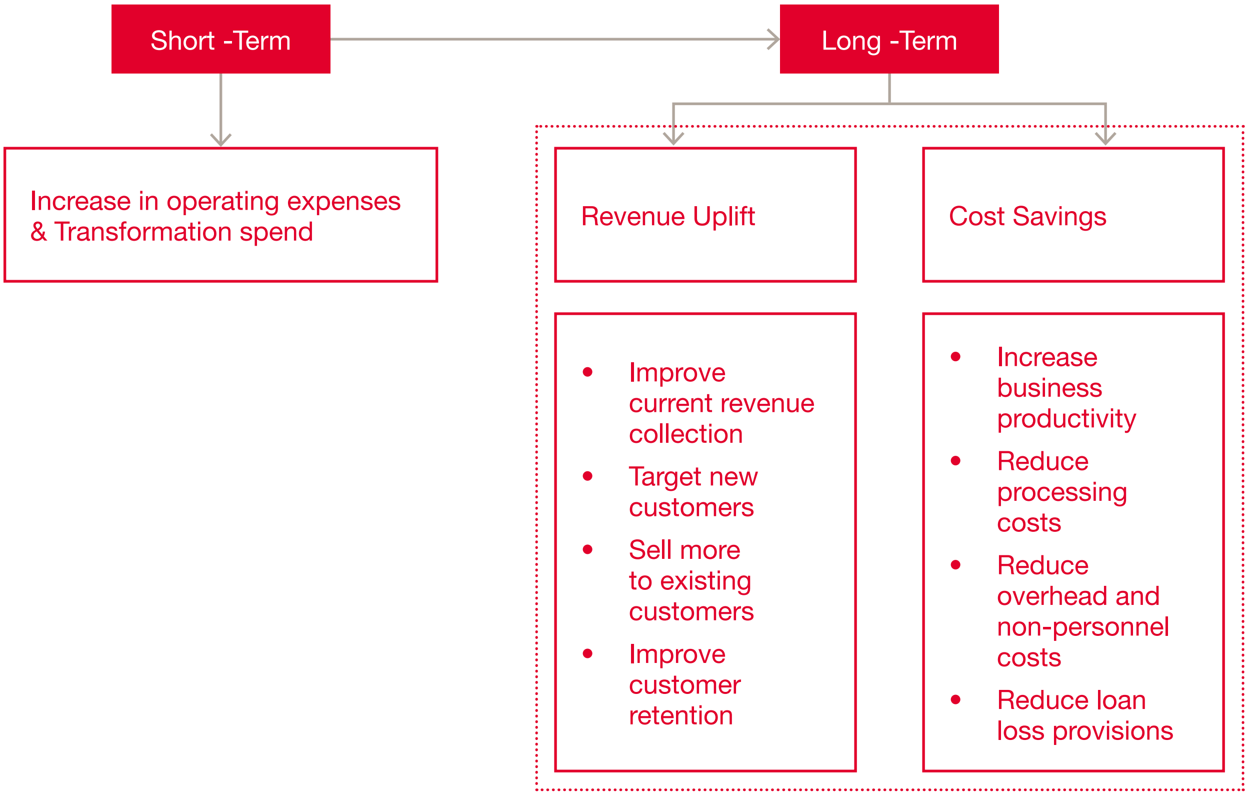


Source: PwC Survey

Section II: Maximising revenue

Technology-driven business models are gaining importance as they drive cost reduction and growth optimisation. The current scenario clearly reflects that adoption of technology has speeded up transactions, reduced costs and lowered the pressure on margins.

From the short-term to the long-term



Over the short term, embedding a technology framework involves a high cost, but over time, in the long run, there is the benefit of increased revenues and higher profit margins.

The primary objective of maximising revenues using technology will take time and will involve a complete overhaul of the banking infrastructure. Various roads lead to increased revenues, right from new products, flexibility and speed of transactions, new customer acquisition, cost reduction and lower risks with increased transparency.

Using technology to maximise revenues may have some of the following benefits:

- Higher customer retention and increased wallet share achieved by providing consistent services and cross-selling based on the application of advanced analytical techniques
- Increased revenue due to shorter (technology-enabled) product inception to market cycle
- Improved margins and profitability through operational process automation and consolidation
- Lower operational costs due to less complex and more flexible application and infrastructure architecture

Technology embedded product platform

The banking industry in India is mature enough for a degree of innovation in order to maintain the momentum. As competition intensifies, banks are gearing up to present customers with quick solutions to their increasing needs.

The product platform needs to be continuously upgraded, with the help of extensive research and development.

Products need to conform to global standards and showcase their uniqueness. For products to be rolled out effectively, the rapidly changing technology upgrades need to be capitalised on.

Presently, the lines between transaction, savings and investment accounts are blurred, with base products undergoing a strain from expectations of real-time updates and access. Information-based services such as alerts, mobile banking and web services are catching up slowly with customers. Products need to be tailored to more granular segments in order to be competitive (for example, language support, senior citizen banking and mobile clients). The design and development of products should primarily be governed by these customer segments.

To address the problem of financial inclusion, banks need to equip themselves with a low-cost operating model. Technology can step in here, in the form of mobile telephony to increase accessibility. To attract customers, there needs to be emphasis on the affordability of the product. Simplicity and flexibility with ease of transaction are some of the other characteristics that need to be blended into the product design.

In a nutshell, technology is envisaged to play a role in the following areas:

- Providing enhanced and actionable information for business critical insights
- Configuring products for geographies/segments
- Managing costs for maintaining existing product platforms
- Maintaining the cost of adding or extending delivery channels
- Reducing costs for servicing customers for existing products
- Pricing products

Banks are also cross-selling to deepen existing customer relationship. The key to increasing profitability is offering the entire product suite to customers while making the most of the distribution network to provide third-party products.

Customer segmentation: A step in maximising revenues

The size of India's population poses a huge challenge to cater to its financial needs. Additionally, the existing infrastructure lacks depth and current products the ability to fulfil customer needs. Varying financial needs of different customer segments has prompted the need for customised financial products.

Banks today are not only looking at new customer acquisition, but are also focusing on the quality of the pool of customers acquired.

Tapping the bottom of the pyramid

In rural areas, where accessibility is a problem, banks are using the micro-finance network and business correspondents and facilitators to bring more people under the ambit of banking services.

Capitalising on the huge untapped potential in smaller towns and cities and rendering financial services to this segment of people poses an immense challenge. The main hindrance is lack of education as these people are neither financially literate nor do they have awareness about the benefits of banking.

To develop products to meet customer needs accurately, it is essential to track the financial behaviour of these customers. The first step towards this is to capture the demographic information of customers. A repository of credit history, savings and investment patterns has been enabled by technology tools allowing data analysis.

This analysis will help attract customers with a good credit history and will help avoid fraud, in addition to developing customised financial products. Moreover, availability of this information across the industry will help the un-banked sections of the population gain access to banking services within a robust credit-analysis framework.

Few banks have explored technology solutions to increase the scale of their micro-finance portfolio, with the use of smart cards and core banking solutions. In the long term, these solutions will reduce transaction costs, improve management of data with enhanced reporting capacity.

Bigger and better solutions

The customer residing in cities and Tier 2 and Tier 3 towns today is a demanding population vying for solutions to their problems in the shortest time. In this scenario, it is only technology that can rescue banks and deliver benefits to customers.

These customers have some degree of financial literacy and their expectations from banks are to earn returns on their savings and maximise their investments. Banks have devised a mechanism to render financial advice supplemented with the most appropriate financial product to customers. Various savings and investment products need to be developed and designed for this segment of customers to attract and retain them over a long-term horizon.

Customer loyalty is extremely hard to get and technology-savvy customers expect banks to use available information and data to provide personalised services. There is a huge demand for relationship-based pricing. The customer is fickle and willing to switch in order to feel valued. Well-informed customers are seen to prefer products from multiple banks.

There is limited exit or switching barriers when it comes to banking services.

Banking services and technology must be flexible and able to adjust rapidly to changing customer and business demands. Most banks offer similar products and services, thereby intensifying competition, and at this juncture it is technology which acts as a differentiator. We can thus say that technology can be used to manage the customer life cycle and give visibility on the entire portfolio of the customer.

Some technology solutions being rolled out to aid the spread of banking services are as follows:

Biometric card

A biometric fingerprint enabled smart card that allows foolproof customer identification without any requirement for a PIN/password as in traditional channel delivery systems is an offline solution requiring only a smart card reading device and a fingerprint sensor at any point of transaction.

Unique Identification (UID)

The inception of UID provides an adept technology- linked solution to address the concern of customer identity, a challenge banks have been trying to deal with. Aadhaar, a 12-digit identity number to be issued by the Unique Identification Authority of India (UIDAI) for all Indian residents, will enable millions of people to open bank accounts for the first time.

This number will be captured and stored in a centralised database and will be linked to the demographic and biometric information of an individual. The use of this number will facilitate verifying the details of an individual online and prove to be cost-effective in the long run.

This has come at an opportune moment for banks and other financial service providers, who can now gain access to the plethora of customer data available, and churn out products as per the requirements of the customer tailored to their profile. The Aadhaar platform can also be used to develop a robust payment infrastructure and thereby reach rural and semi-urban areas.

Survey Results:

These results indicate that most banks primarily use technology for ramping up their product range, enhancing it with new features and benefits. Some IT initiatives undertaken by major banks to support the introduction of new banking products are as follows:

- Financial inclusion technology: Biometric technology for illiterate population
- Cash management offerings
- Adding functionalities in Internet banking and ATM
- Use of robust Customer Relationship Management (CRM) and powerful analytical solutions

Some other banks believe in using technology to scale up their distribution and improve their service delivery mechanism, as a crucial factor to attract customers. Some initiatives include the following:

- Web Channel Strategy
- E-Banking platform
- ASP model for mobile banking
- Mobile and Internet banking
- Introduction of new variants of ATMs
- Self service kiosks, etc.

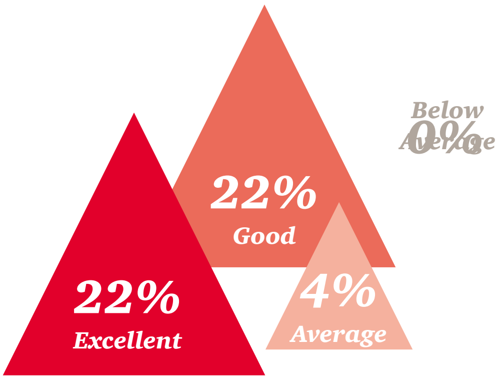
Only 11% of the respondents agree that technology has been put to use for customer segmentation. This statistic is a cause for concern, as segmentation of customers is important to churn out the right kind of products suited to customer needs.

Segmentation is extremely important as it can help banks identify the profitable segments, enabling them to design customer-specific products. Similarly, banks can price and organise the servicing and management of customers by segmentation. To help in the segmentation process, banks have established business intelligence and other analytical capabilities.

Around 56% of banks say that they can clearly identify the profitable channels, customers and products but do not understand the interplay and relation between them. The remaining 44% just have a broad idea of the same.

Ninety-two per cent of respondents agree that their IT landscape is adept at supporting business growth while the remaining eight per cent believe that their technological capabilities to sustain growth is quite average.

IT capability to support growth



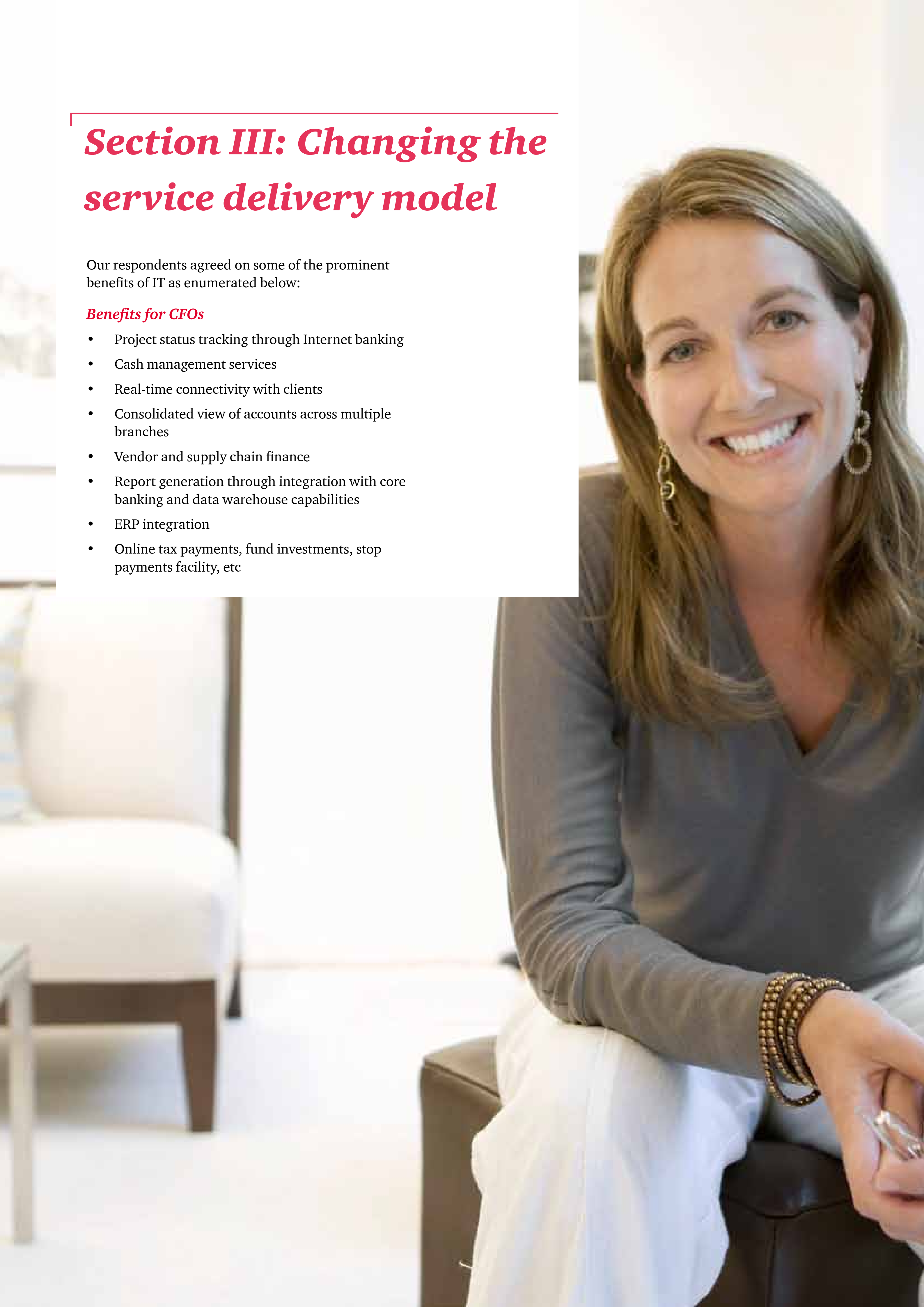
Source: PwC Survey

Section III: Changing the service delivery model

Our respondents agreed on some of the prominent benefits of IT as enumerated below:

Benefits for CFOs

- Project status tracking through Internet banking
- Cash management services
- Real-time connectivity with clients
- Consolidated view of accounts across multiple branches
- Vendor and supply chain finance
- Report generation through integration with core banking and data warehouse capabilities
- ERP integration
- Online tax payments, fund investments, stop payments facility, etc



Customer experience at the branch

Only satisfied customers will pledge loyalty in the long run and it is critical for banks to focus on this aspect of customer orientation, in order to survive amidst competition. Differentiation has been a persisting challenge as customers draw their experiences through the ease, convenience and consistency of various channels of interaction.

It is inherent to get the customer experience formula right, as enhanced customer experience will lead to an increased number of referrals which in turn, will lead to profitable growth. Analysis of trends has indicated that customers prefer to use different channels for different products. For instance, for deposit products, customers usually access the branch, whereas for lending products, customers browse through products online before deciding.

Also, banks need to keep in mind the use of technology by demography, where the younger generation dexterously uses the online platform. The older generation is more conservative and traditional, going back to the branch for all their needs.

Customer experience rests on the pillars of people, process and technology, which improve the quality of interaction and consistency.

People: Using the appropriate CRM technology, offering the right product to the customers at the right time; developing and designing an integrated model to capture and update customer data.

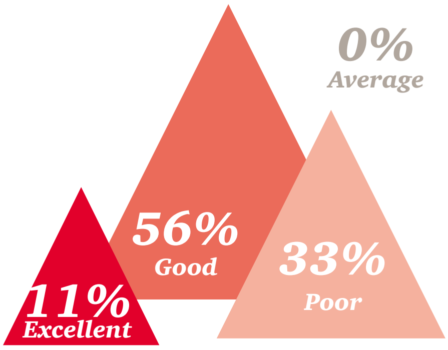
Process: Positioning efficient band of staff to help customers at the branches; aligning IT tools to business strategy and resulting in meeting customer needs.

Technology: Streamlining processes resulting in efficient transactions; creating an interactive environment introducing self-service kiosks, customer-specific call-handling experience.

What the survey indicated

The survey reflected that technology today has immense capacity to enhance the customer experience at the branch.

Improving customer experience at the branch



Source: PwC Survey

Over half of the respondents said that their banks have been successful in enhancing customer experience at branches.

Some of the measures that have been undertaken to enhance the experience of the customer include the following:

- CRM at branches
- On-site ATMs
- POS enabled green channel counter
- Bunched-note acceptors
- Self-service kiosks
- RFID technology
- Complete profile of the customer at the click of a button
- Reduction in cash transaction time
- Single-window operations
- Clearing and transfer of funds between branches

CRM and its benefits

This technology primarily aids in getting an overall perspective of the customer. CRM can also enable banks to provide differentiating experiences for customers based on their demographics, income group and transactional behaviour. The analytical and transactional system enables banks to sell, offer complete services and market other products as well.

To draw increased revenues from customers, it is necessary that banks utilise available customer information to sell product suites across segments. The bank's CRM architecture needs to be aligned such that customer feedback helps them improve business processes and drive efficiency.

Survey results

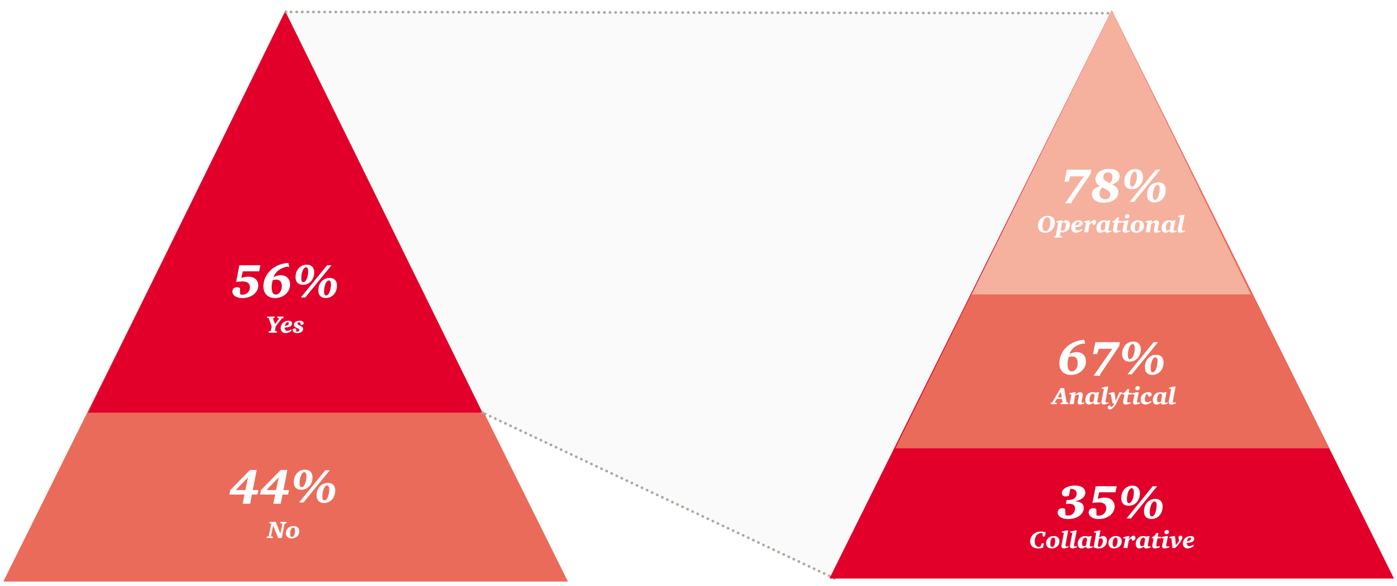
In the current scenario, banks, insurance companies, and other service providers realise the importance of CRM and its potential to help in acquiring new customers and retain existing customers.

Building a strong relationship with customers will require systematic co-ordination between IT and marketing for extended service to customers. A robust CRM infrastructure helps identify the bank's most profitable customers and prospects, and helps focus on expanding account relationships with those customers through personalised marketing, re-pricing, discretionary decision-making and customised service.

When we asked banks whether they had some kind of a CRM structure in place, around 56% said yes. Out of this, 78% said they used the operational and 67% used the analytical components.

The operational component automates everyday business processes like sales, marketing and service and records every touch point with the customer.

The analytical component enables the analysis of collected data to enhance customer relationships. However, only 33% of the respondents said they used the collaborative component that enables interactions with customers across multiple channels such as email, telephone, internet, etc, critical for enriching the customer experience.



Use of CRM *Components of CRM used*

Source: PwC Survey

Improving the customer experience

To elevate the customer experience, banks have installed fully integrated, multi-channel, personalised banking systems for customers at the branch, with the use of telephone, mobile platform, ATMs, internet and TV. Banking today is all-inclusive, providing not only day-to-day banking services, but also financial solutions for the customer.

With multiple channels reaching out to the customer, integration is the next step for banking institutions. The goal of channel optimisation can be achieved only if channel integration is undertaken successfully. Each individual customer indicates preference for a particular channel. Banks need to devise a method to offer customers a combination of channels to suit individual requirements and preferences.

Technology needs to weave these multiple channels together to create an all-inclusive offering. Delivery channels in silos will not deliver increased profitability and return on investments. Channels operating in silos fail to provide an integrated view of products and customer relationships. Similarly, delivery channels working in silos do not turn out to be viable over the long term.

An un-integrated view of the customer's portfolio affects the capacity to cross-sell and cater to customers across product lines. On the other hand, fragmented customer information creates complexities in customer segmentation, making it difficult to reach out to the customer with the right product and delivery interface. Banks therefore need to upgrade their technology on a regular basis, with multiple channels and collate customer information offering solutions with the right products and services.

One of the concerns that the alternate delivery channel meets is that of low awareness, leading to low usage levels. Awareness needs to be created among customers to depend less on the branch and more on alternate delivery channels. These alternate channels result in immense cost savings for banks.

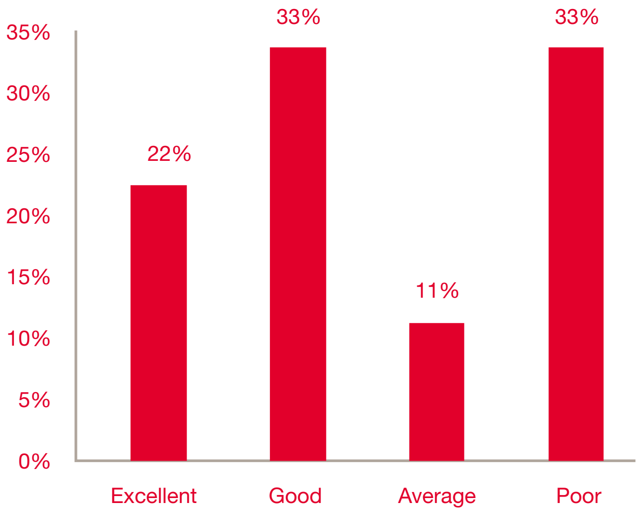
Taking a retrospective view of the customer experience gained by using alternate channels will help banks penetrate barriers for customers and push for increased usage of a particular channel.

Areas where technology can be used to drive the customer experience are speed of problem resolution, increased ATM coverage and other improvements in the quality of service.

Survey results

The survey showed mixed opinions as far as use of technology in improving the customer experience at alternate delivery channels. Only 22% felt that technology was being utilised to the optimum to improve the customer experience with alternate delivery channels like ATM, internet and mobile banking.

Improving customer Experience at alternate delivery channels



Source: PwC Survey

Some of the measures that have been taken to improve the customer experience at alternate delivery channels are as follows:

- Online tracker for customer requests like cheque book, etc
- Re-designing ATM services to increase speed
- Mobile banking
- Payment of utility bills in ATMs, tax collection on behalf of government, ticket bookings

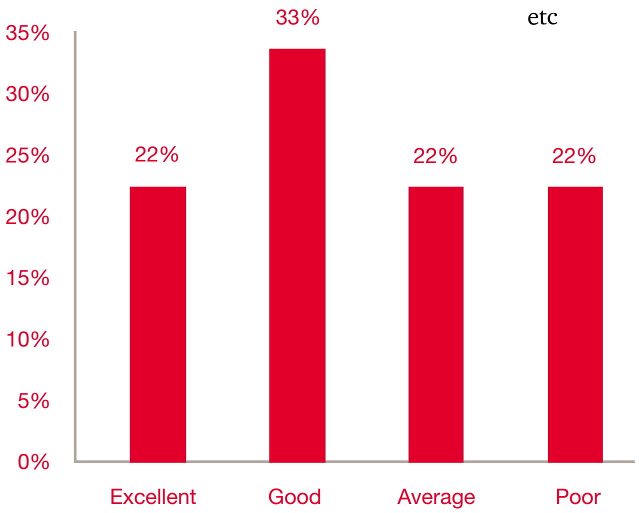
On improving the service experience of corporate clients

No predominant statistic emerged out of this section. The survey suggested that technology was being used in a big way to support the service experience of corporate clients.

Some initiatives undertaken to service corporate customers are as follows:

- Cash management, with e-collections and e-advances
- Project finance
- Corporate internet banking
- Online salary transfer
- Client segmentation to enable specialised services such as bulk upload of employee salary, bulk transfer of funds to various branches, etc

Service experience of corporate clients



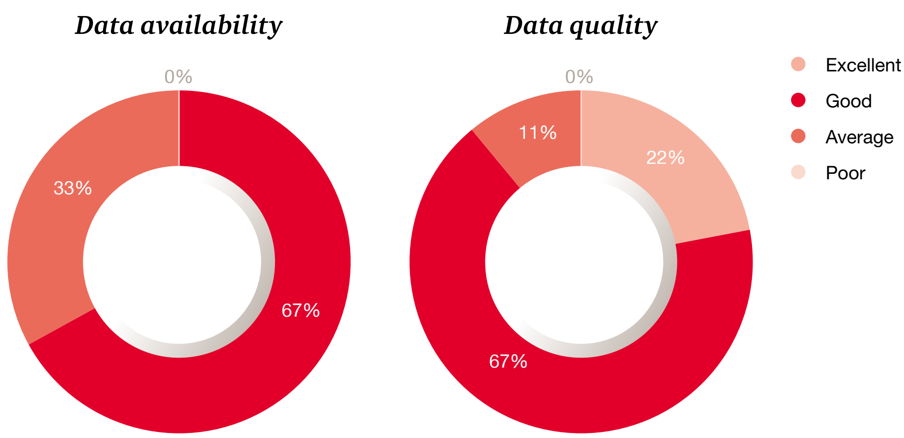
Source: PwC Survey

Information management systems

Our survey covered the maturity of information management systems within the bank. About 67% of the respondents rated themselves as good with all the information required by the management available from an organised data source. Around 33% rated an average and interestingly, none of the respondents considered themselves to rank as poor. This is an improvement over last year where at least 14% of the respondents claimed that data was poorly available.

Apart from data availability, data quality is the backbone of any well-informed decision. It is therefore important to continuously upgrade and update the data available to enhance its quality and relevance. Around 22% of the respondents had complete and accurate customer- and accounts-related data with a single version of truth across source systems.

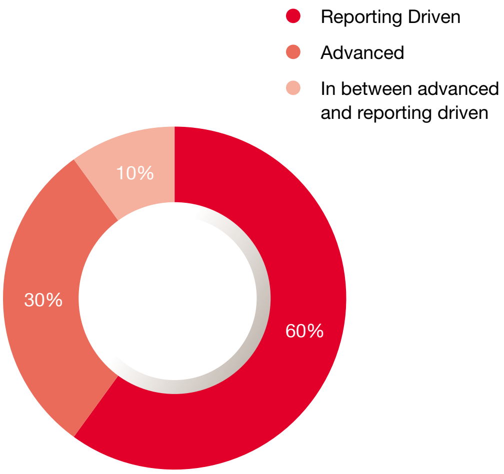
The remaining 78% had access to clean data but which lacked uniformity across all source systems. However, this year, none of the respondents claimed that their data quality was poor which was a huge improvement over the seven per cent last year.



Source: PwC Survey

Around 33% of the respondents put down their information management systems as advanced, providing timely and accurate information and supporting ad-hoc reporting. However, the majority of the respondents, around 67%, said that they were reporting driven by basic functionalities. While these functionalities were capable of generating operational reports, they lacked the ability to support ad-hoc reporting and analytics expertise, even in the areas of marketing analytics and loss forecasting. However, many of these banks are looking to implement analytics in the next six months.

Description of the information management system



While most banks have reached a level of maturity in terms of data availability and reliability, the information requirements continue to be archaic and reporting-driven to a large extent, across banks in different segments.

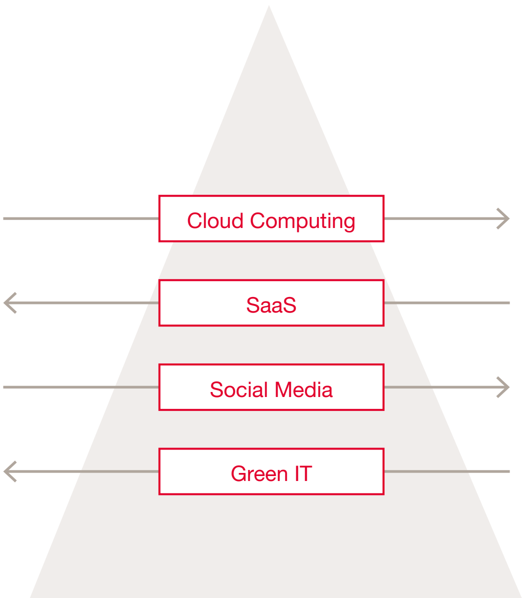
Information is present in silos, and there is a lack of agility caused by low levels of automation and integration across systems. In the current scenario, there are two key imperatives for banks to invest in robust information architecture:

- *Making the most of the use of analytics for increasing operational efficiencies and driving revenue growth*
- *Following the RBI mandate to achieve a common end-state of automated data flow from banks to RBI, for filing regulatory returns, in the near future*

Both of the above will entail banks to re-think their existing information landscape to gear up for addressing both regulatory and competitive pressures.

Section IV: Emerging areas of technology

Banks need to evolve from using the conventional modes of reaching out to customers through emails or attractive websites and move on to increased usage of blogs and other online communities.



Emerging technologies have carved a niche for themselves amidst various degrees of IT innovations driving business transformation. Businesses are adopting technologies such as Cloud Computing 5X faster than IT operations, while 70% of IT resources captive in maintenance and operations are looking at improved utilisation in other business areas, maximising efficiency and building economies of scale.

Bank executives need to manage their organisations through the current economic conditions without losing sight of the critical elements that define their future survival. Financial institutions that innovate will enjoy significant advantages over banks encumbered by antiquated technologies and manual processes. Organisations should define how and when emerging solutions, technologies, processes, and organisational models should be adopted in order gain a competitive advantage.

However, there are some initial hiccups in getting started with these technologies. Aligning technology innovation to strategy, implementation and support may pose a challenge. But lack of expertise in implementation should not prove a deterrent.

The 14th Annual PwC Global survey revealed that 87% of banking and capital markets CEOs believe that innovations will lead to operational efficiencies and provide them with a competitive advantage. Sixty-four per cent also believe that their IT investments will help them tap into new marketing and transactional opportunities such as mobile devices and social media.

Cloud computing has been defined by one CFO as "an approach to consume technology in a 'pay-as-you-go' model where consumers only pay for what they use."

Adoption of cloud computing across the Asia-Pacific region, excluding Japan, will spike in 2010, according to IDC, with spending on IT cloud services growing almost three-fold and reaching $42 billion by 2012.

Consulting giant Gartner expects that by 2012, 20% of businesses worldwide will own no IT assets and India-centric companies will represent 20% of the leading cloud aggregators globally.

Technology has been elevated to great heights with the adoption of cloud computing progressing steadily.

Banks and insurance companies are usually seen to struggle with the burden of huge data centres equipped with great degrees of computing power, most of which is under-utilised. Cloud computing can provide answers to optimum data centre utilisation, and speed and cost efficiencies. The predominant advantage of this technology for banks is the storage of huge volumes of data, without the need to construct a centre for IT storage. It also yields cost savings with optimal use of IT and removes the hassles of infrastructure expansion.

In a recent survey by BS&T/ InformationWeek Analytics survey, a majority of bankers are testing and researching cloud environments and are intensely interested in seeing what cloud concepts might accomplish for their organisations and the businesses they serve. Thirty-seven per cent of banks expect to deliver 10 to 25% of IT services over a cloud in the next two years.

Benefits

- *Reduce in-house IT infrastructure*
- *Realise provisioning improvements from months to minutes*
- *Improve service and alignment to business requirements*
- *Free IT resources for enhanced business focus*
- *Calibrate the value of every service to a business outcome*

Use of social media

The rapid growth of social networking sites has opened up a huge window of opportunity for banks. Globally, banks are slowly accepting the fact that social media can be used as an extensive marketing platform as well as to address customer queries. However, an element of trust needs to be inculcated in the customer mindset. The security of confidential information needs to be assured.

As per a Datamonitor report, only six per cent of retail banks use social media to deal with customer queries and a further one per cent look to use it between 2011 and 2012.

Developed economies have indicated a healthy response to adopting these emerging technologies, but other economies still seem to be slightly hesitant.

For banks, the use of social media will lead to improved marketing, capturing consumer perceptions, brand building, increased scope for product research and will help establish a relationship with customers. Such platforms also render transparency to the transactions of banks.

Another feature of social networking in the form of convergence of voice, data and video makes this space more attractive. Banks can use this to their advantage and create an experience for customers.

Ultimately, however, the acceptance of these networks will be governed by consumer trends and the choice of an individual to manage his/her finances.

Banks need to tie up with social network providers to create the necessary interface and realise the potential to the optimum.

Overall Benefits

- *Cost reduction, guaranteed and effective results*
- *Social applications to address customer concerns*
- *Customer education on products to provide feedback*
- *Community development to target customer segments*

Software as a Service (SaaS)

Software as a Service (SaaS) is a software distribution model in which applications are hosted by a vendor or a service provider and made available to customers over a network, typically the internet.

Benefits

- Banks can ensure that all locations use the correct application software version so that the format of the information being recorded and conveyed is accurate.
- The model helps reduce management burden for corporate applications and increases their availability to locations.
- It provides improved efficiency, lower risk and relevant return on investment.

Green IT

Green IT is the optimal use of information and communication technology (ICT) for managing the environmental sustainability of enterprise operations and the supply chain, as well as those of their products, services, and resources, throughout their life-cycles.

Symantec's 2009 Green IT Report finds that 97% respondents say that they are at least discussing a green IT strategy, while 45% have already implemented green IT initiatives.

Benefits

- Compliance with regulatory norms on ecological footprint
- Waste reduction
- Cost reduction
- Improved efficiency and productivity
- Reduction of carbon emission
- Reduction of power consumption and saving of energy

Survey results

Making optimum use of technology, most banks said that they were exploring the option to tie up with a mobile service provider to reach out to the un-banked population. Around 89% of respondents said that they would use mobile applications to facilitate fund transfers to the un-banked population, while 78% said that they would use agents of mobile service providers as Business correspondents/business facilitators

What the CIOs said

Technology will dominate banking activities and will lead the growth of the sector. Most of the respondents agreed that cloud computing and social media will be the emerging technologies that the banking sector needs to watch out for.

Around 56% of the respondents felt that their banks rated as good in their ability to use disruptive technologies for innovative banking. A small percentage of respondents (22%) felt that their banks were not equipped well enough to use disruptive technologies.

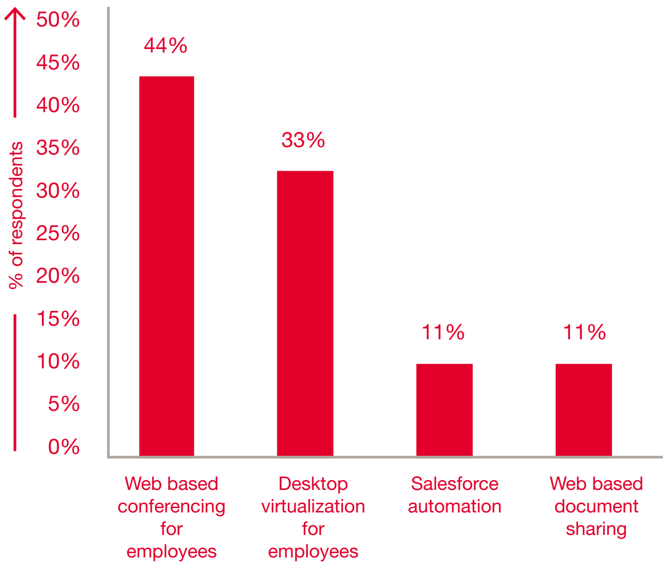
> *Around 50% of the banks have undertaken some form of cloud computing initiative. Forty-four per cent have initiated web-based conferencing for employees. Thirty-three per cent have desktop virtualisation for employees.*

However, in the sample size, very few banks have considered sales force automation and web-based document-sharing. Some of the other kinds of cloud computing initiatives undertaken by banks include virtualisation of Intel-based platform, private clouds for all applications in Windows/Linux, etc.

Potential usage of social media

The use of social networks by banks still has a long way to go before it matches the popularity of mobile technology. About 33% of the respondents felt that social media can be used for community-building and marketing and promotion, while only 22% felt that social media could be used for product research and customer service. The other areas where social media could be useful include alumni engagement, recruitment, relationship management, etc.

Cloud computing initiatives



Source: PwC Survey

Potential use of social media

Source: PwC Survey

Conclusion

Our observations and views have been explicitly expressed in this report, and we have tried our best to capture all inputs from the CIOs who gave their views. Our data analysis and collation of perspectives only strengthen the argument about technology spearheading growth in the next decade.

Increasing customer demands have pushed banks to raise the bar for customer service. Banks need to transform their business models and get equipped with better technology to succeed in the new environment.

Current technology solutions are often a web of archaic systems and software patches. Banks should strive to overcome the historic organisational resistance to large-scale technology projects to institute fundamental technological change. Agile institutions stand to triumph over their competitors if they prioritise and select the most efficient and effective paths to meet their objectives.

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The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

CII is a non-government, not-for-profit, industry led and industry managed organisation, playing a proactive role in India's development process. Founded over 116 years ago, it is India's premier business association, with a direct membership of over 8100 organisations from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 90,000 companies from around 400 national and regional sectoral associations.

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